Appln No. 10/602,298
Amdt date July 18, 2005
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A semiconductor laser chip, comprising:

a ridge structure disposed between channels formed on a junction surface of the laser chip, the ridge structure protruding beyond the junction surface; and

a plurality of pads only on non-active areas of the junction surface, wherein the plurality of pads protrude beyond an edge of the ridge structure.

2. (Original) The laser chip of claim 1, further comprising:

a substrate comprising the junction surface and a mounting surface, wherein the laser chip is capable of being mounted onto another surface at the mounting surface.

3. (Previously Presented) The laser chip of claim 1, wherein the plurality of pads are configured to abut a manufacturing tool without the manufacturing tool abutting the ridge structure.

4. (Previously Presented) The laser chip of claim 3, wherein the plurality of pads are configured to abut the manufacturing tool having a suitable vacuum force.

5. (Previously Presented) The laser chip of claim 1, wherein the plurality of pads are configured to function as reference reticles for the manufacturing tool.

6. (Canceled)

7. (Previously Presented) The laser chip of claim 1, further comprising a plurality of contacts on active areas of the junction surface, wherein the plurality of pads are disconnected from the plurality of contacts.

8. (Original) The laser chip of claim 1, wherein at least one of the plurality of pads comprises a metallic material.

9. (Original) The laser chip of claim 1, wherein at least one of the plurality of pads comprises a non-metallic material.

10. (Previously Presented) The laser chip of claim 1, wherein the laser chip is configured for operation at a frequency of approximately 1 GHz or higher.

11. (Original) The laser chip of claim 1, further comprising a source current modulated in time.

12. (Currently Amended) A method for providing a semiconductor laser chip, comprising the steps of:

(a) providing a ridge structure at a junction surface of the laser chip between channels formed on the junction surface, the ridge structure protruding beyond the junction surface; and

(b) providing a plurality of pads only on non-active areas of the junction surface, wherein the plurality of pads protrude beyond an edge of the ridge structure.

13. (Original) The method of claim 12, wherein the providing step (a) comprises:

(a1) providing a substrate comprising the junction surface and a mounting surface, wherein the laser chip is capable of being mounted onto another surface at the mounting surface.

14. (Original) The method of claim 12, further comprising:

(c) holding the laser chip using a tool, wherein the tool abuts the plurality of pads without abutting the ridge structure.

15. (Original) The method of claim 14, further comprising:

(c1) optimizing a vacuum force at which the tool abuts the plurality of pads.

16. (Previously Presented) The method of claim 14, wherein the plurality of pads function as reference reticles for the tool.

17. (Original) The method of claim 12, wherein the ridge structure protrudes beyond an edge of the junction surface.

18. (Previously Presented) The method of claim 12, further comprising:

(c) providing a plurality of contacts on active areas of the junction surface, wherein the plurality of pads are disconnected from the plurality of contacts.

19. (Original) The method of claim 12, wherein at least one of the plurality of pads comprises a metallic material.

20. (Original) The method of claim 12, wherein at least one of the plurality of pads comprises a non-metallic material.

21. (Previously Presented) The method of claim 12, wherein the laser chip operates at a frequency of approximately 1 GHz or higher.

22. (Original) The method of claim 12, further comprising a source current modulated in time.

23. (Previously Presented) A high-speed, directly modulated semiconductor ridge waveguide laser, comprising:

a substrate comprising a junction surface;

a ridge structure disposed between channels formed on the junction surface, wherein the ridge structure protrudes beyond an edge of the junction surface; and

a plurality of pads on the junction surface, wherein the plurality of pads protrude beyond an edge of the ridge

structure, wherein the plurality of pads reside only on non-active areas of the junction surface, wherein the plurality of pads are configured to abut a manufacturing tool without the manufacturing tool abutting the ridge structure.